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Knowledge and Readiness for Implementation of Electronic Nursing Record (ENR) in the Andi Makkasau Hospital, Pare-Pare

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Abstract

Electronic Nursing Record (ENR) is an application that will be developed to provide facilities for nurses to perform nursing care documentation via the computer software that will allow nurses, provide advantages in terms of effectiveness and increasing the time nurses visit patients. From the preliminary study in several hospitals in general are still using paper format provided by the hospital and some of the results of research in hospitals in Indonesia stated that nursing documentations are still many unfilled, for various reasons, among others, the workload, limited time not kala important is the knowledge of nurses in documentation. Therefore in this study before the development model of nursing care documentation that is technology-based Electronic Nursing Record (ENR), the researchers conducted the initial assessment (assessment phase) regarding the analysis of knowledge and preparedness of nurses in the implementation of Electronic Nursing Record (ENR). This research is descriptive analytic research with cross sectional approach. Sampling was done by purposive sampling to nurses in hospitals Andi Makkasau Parepare of 118 people. Data were collected using questionnaires knowledge and readiness.

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The results showed that the knowledge of nurses about nursing care documentation majority have a good category (97.5%) and the readiness of nurses towards the implementation of Nursing Eletronic Record (ENR) are largely in good keategori (58.5%), this shows that nurses in Andi Makkasau Hospital Parepare have big capital and the conditions are ready for nursing care documentation based technology that is Eletronic nursing Record (ENR).

Keywords: eletronic nursing records; nursing documentation.

1. Introduction

Nursing services as an integral part of the health service clearly has contributed greatly determines the quality of hospital services. So every effort to improve the quality of hospital services should also be accompanied by efforts to improve the quality of nursing services [1].

Nursing documentation was one of the tools used in communications validate nursing in nursing care, means of communication between other health team and become a document of patients in nursing care (Nursalam, 2002). Documentation was part of a nurse's full accountability to clients treated. Documentation of care was an important part of clinical documentation. However, the nursing process documentation was often lacking in quality. Expectations are higher that the computer support in nursing documentation will help improve the quality of documentation [2].

Based on the results of research conducted by [3] showed a significant increase in the quantity and quality of documentation on three from the four rooms of 240 inpatient nursing documentation (= 60 documents per ward), chosen randomly from registration hospitalization. The results showed that the introduction of computer-based nursing documentation system can help improve nursing documentation. The quality of nursing documentation was not only influenced by human factors such as aspects of motivation and attitudes of nurses towards documentation, but also relevant to the organization in a hospital environment and technological aspects of performance and compliance task. Interventions to improve the quality of documentation needs to be planned continuous and a constant challenge.

Other studies have shown a significant increase of the quantity and quality of documentation on three of the four departments. The positive aspects include the completeness of the documentation of the nursing process, the formal aspects and quality improvement by nurses. The negative aspect was mainly related to the content of the nursing plan. The research was conducted by [4] at one hospital showed that there was 87% extra nurses working more than 12 hours because they have to finish documenting the conventional manner. In this regard, the creation of a sub-committee of the technology to determine whether the technology can improve service quality, work efficiency, user satisfaction for nursing services.

The use of electronic recording (electronic nursing documentation system) has long been used by countries that are already developed. Indonesia as a developing country, in several public and private hospital have started to implement it, although still limited to the demographic data of patients, nursing assessment, disease diagnosis, and therapy. Meanwhile, related to the implementation, development and evaluation records were still paper-

based [5].

Information technology in the field of nursing was needed by nurses considering the workload of nurses was high enough, on one hand nurses must manage the patient while on the other hand the nurses also have to manage the data and information obtained (Walter, et al, 2010). Information technology in the field of nursing was very effective to help nurses manage the recording and reporting of all activities nursing services. Information technology can reduce errors by 3 ways to prevent errors and adverse events, facilitating a more rapid response to adverse events and gives direction and feedback to the adverse event [6].

Based on preliminary data General Hospital (Hospital) of Andi Makkasau Parepare, documentation of nursing care were still using paper format. Results of preliminary interviews with hospital nurses miraculous that the nursing documentation was not being filled because of a problem understanding of the importance of documentation, time constraints, the number of patients who were not balanced with the amount of power that the increased workload in addition to the sometimes format nursing care was not available.

Based on the above can set the general purpose of this study was to discuss the analysis of knowledge and preparedness of nurses to implement Electronic Nursing Record (ENR) in hospital of Andi Makkkasau Parepare.

2. Materials And Methods

2.1 Research design

This research uses descriptive design, the quantitative stage. Quantitative design was used to determine the knowledge and preparedness of nurses to the implementation of documentation models based technology, Electronic Nursing Record (ENR). This type of research was descriptive analysis with cross sectional approach means that the measurement variables only done one at a time.

2.2 Population and Sample

The population in this study were nurses in hospital of Andi Makkasau Parepare. The sampling technique used in this study was by purposive sampling with sample number 118 nurses.

2.3 Method of collecting data

The study was in the stages of assessment using two questionnaires, were knowledge of nursing care documentation and the type of scale used was Gutman and the readiness of nurses in hospital of Andi Makkasau Parepare to implement application of nursing documentation based on technology, Electronic Nursing Record (ENR) with the Likert scale was used type.

Analysis Data

Analysis of the data used in this research was descriptive analysis were performed to describe how to create a

variable with the frequency distribution table. This method was chosen because the scale data in the ordinal form.

3. Result of Research

3.1 Characteristic of respondents

The number of respondents who researched that most of the female with 114 people (96.6%), while men were 4 (3.4%). respondents aged 17-25 years were 33 people (28.0%), aged 26-35 years were 66 people (55.9%), aged 36-45 years were 11 people (9.3%) , aged 46-55 years were 8 people (6.8%). Respondents based on working period is the tenure of 1-5 years were 71 people (60.2%), while the least is the working period for more than 30 years were 3 people (2.5%).

Respondents with terms of 6-10 years were 28 people (23.7%), with working period of 11-15 years were 7 people (5.9%), with working period of 16-20 years were five people (4.2%), working period of 21-25 years were 4 people (3.4%) and no respondents with terms of 26-30 years (0%). The number of responses given by undergraduate nursing education were 56 people (47.5%), then a diploma were 35 people (29.7%), then nurse professional were 25 people (21.2%), and SPK was only 1 person (0.8%) and master was only 1 (0.8%).

3.2 Nurses knowledge about Nursing Documentation

Almost all nurses in hospital of Andi Makkasau Parepare have sufficient knowledge about nursing care documentation, in good categories were 97.5%, and only 2.5% in the medium category and no nurses with less knowledge categories, can be found on the table 1.

Table 1: Distribution of nurses knowledge of nursing care documentation in Makkasau Hospital, Papre –pare

Category	Number	(%)
Enough	115	97,5
Middle	3	2,5
Less	0	0
Total	118	100

Knowledge of nurses about nursing care documentation based on in each room. In both categories were a nurse at the VIP room I, II VIP, VIP III, Bougenville, Jasmine and and Nusa Indah by the same percentage (100%), then the room of Lotus (93.9%) and the room of Chrysanthemum (77.8%) can be seen in appendix page table 2.

3.3 Readiness Nurses on the Application of Electronic Nursing Record (ENR)

The majority of nurses in hospital of Andi Makkasau Parepare has good readiness to implementation of

Electronic Nursing Record (ENR) consist of good categories were 58.5%, 41.5% in the medium category and no nurses with less readiness category.

In more researchers describe the category of nurses readiness distribution in hospital of Andi Makkasau city of Pare Pare on the implementation of Electronic Nursing Record (ENR) based treatment rooms where work can be seen on appendix page table 3.

Table 2: Distribution of nurses knowledge of nursing care documentation in Makkasau Hospital, Pare –pare base on the occupational room

Rooms	Good		Moderate		Less	
	Number	(%)	Number	(%)	Number	(%)
VIP I	8	100	0	0	0	0
VIP II	10	100	0	0	0	0
VIP III	11	100	0	0	0	0
Anggrek	12	100	0	0	0	0
Asoka	12	100	0	0	0	0
Bougenville	8	100	0	0	0	0
Melati	16	100	0	0	0	0
Nusa Indah	16	100	0	0	0	0
Seruni	7	77,8	2	22,2	0	0
Teratai	15	93,9	1	6,3	0	0

Table 3: Distribution of nurses readiness in Makkasau Hospital, Pare –pare

Category	Number	(%)
Good	69	58,5
Moderate	49	41,5
Les	0	0
Total	118	100

Sequentially readiness of nurses based on each room that are in both categories ranging from the highest percentage of nurses in the room of Jasmine and Nusa Indah by the same percentage (81.3%), VIP I room also room of Asoka (75%), Lotus room (62.5%), VIP III (54.4%), VIP room II (50%), the room of Chrysanthemum (33.3%), Orchid room (25%) and the last was room of Bougenville (12, 5%), can be found on appendix page table 4.

Table 4: Distribution of nurses readiness in applying *Electronic Nursing Record (ENR)* in Makkasau Hospital, Pare –pare, base on the occupational room.

Rooms	Good		Moderate		Less	
	Number	(%)	Number	(%)	Number	(%)
VIP I	6	75	2	25	0	0
VIP II	5	50	5	50	0	0
VIP III	6	54,5	5	45,5	0	0
Anggrek	3	25	9	75	0	0
Asoka	9	75	3	25	0	0
Bougenville	1	12,5	7	87,5	0	0
Melati	13	81,3	3	18,8	0	0
Nusa Indah	13	81,3	3	18,8	0	0
Seruni	3	33,3	6	66,7	0	0
Teratai	10	62,5	6	37,5	0	0

4. Discussion

4.1 Nurses knowledge about Nursing Documentation

This study showed that the majority of nurses have knowledge about nursing care documentation in good category (97.5%), 3% of nurses have moderate knowledge and none of the nurses who have less knowledge about nursing care documentation. The measurement of knowledge using 13 items of questions with "Yes" and "No". Those questions was a series of questions prepared by the basic theories were considered very important to know before the implementation of Electronic Nursing Record (ENR) because knowledge was the basis for the nurse to be able to do their functions, duties, and their role as providers of nursing care along with their responsibility.

The result can be assumed that nurses in hospital of Andi Makkasau, Parepare has good authorized capital (knowledge to implement the electronic-based nursing care, it also shows a good understanding of the theory of nursing care. Similar to the study conducted by Mastini (2013), that respondents have good knowledge with appropriate documentation completeness were 83.3% of respondents with less knowledge with complete documentation does not correspond were 86.4%. Knowledge relating to the completeness of the documentation of nursing care ($p < 0.05$) in which the results obtained by the analysis of the knowledge questionnaire were 14 questionnaires filled out by the nurse on duty in the medical surgical and inpatient.

Knowledge according to Locke in [7] which explains that after humans get information will be processed further by thinking, process, questioning, classify and reflected. The good knowledge to be preserved by digging a deeper knowledge of nursing care documentation [8].

If the nurse knowledge was good, it tends to have the ability to have a complete nursing documentation, vice versa, if the nurse knowledge was not enough, they showed incomplete nursing care documentation. It will drive nurses to be ready to apply the Electronic Nursing Record (ENR) [9, 10]

4.2 Readiness Nurses on the Application of Electronic Nursing Record (ENR)

The study also showed that nurses have largely preparedness for the implementation of Electronic Nursing Record (ENR) in either good category were 58.5% , 41.5% of nurses had readiness in the medium category and none of the nurses who have a poor readiness for the implementation of Electronic Nursing Record (ENR). Measurement readiness to use 10 statements with "Strongly Agree," "Agree", "Disagree" and "Strongly Disagree". A statement of which approach strongly agree that "The existence of nursing care electronic documentation software will help nurses make the team better health services", "I will study well if there are electronic nursing documentation system". While the answer is not agreed to appear on the statement "can be harmful to the patient if the nurse has electronic nursing documentation system", and "electronic nursing documentation system will degrade the performance of the profession".

It is important for nurses were openness and confidence to accept and utilize electronic nursing care well. Readiness owned nurse is an initial step that is very appropriate to begin the implementation of Nursing Electronic Record (ENR). This illustrates that the nurses are in a good readiness to implement ENR.

Response to the statements contained in the instrument indicates that the nurse in hospital of Andi Makkasau Parepare realize the importance to create a development in terms of nursing care documentation. Nurse is a resource that supports improving the quality of health services in hospital, and therefore any form of developments in it is a good faith to support the improvement of health services.

Readiness was an illustration of the attitude of a determination by the individual liking or disliking toward the object (stimulus). The attitude was emerging here could be interpreted if the better preparedness of nurses towards implementation of Electronic Nursing Record (ENR), there is usually a tendency to do a proper and appropriate documentation.

5. Conclusion and Suggestion

From the results, it can be concluded that the nurse's knowledge about nursing care documentation, majority have a good category and the readiness of the nurses on the application of Electronic Nursing Record (ENR) largely in good category, this shows that nurses in hospital of Andi Makkasau Parepare have big capital and conditions readiness for implementing nursing care documentation based on technology, Electronic nursing Record (ENR).

The research could be able to continue to develop a model of nursing care documentation technology, Electronic nursing Record (ENR) which is applicable in the hospital. It is expected that the model obtained can later be implemented in other hospital so some of the nurse constraints in terms of nursing care documentation could be overcome.

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